

**WHAT IS CLAIMED IS:**

1. For use in a telecommunication network, a switch comprising:

a plurality of call control agent functions, at least two of the call control agent functions associated with different signaling protocols, the signaling protocols defining a plurality of signaling control primitives; and

a call control function operable to control routing of telephone calls through the switch, wherein the call control function is accessed using an application programming interface (API), the API comprising a plurality of classes defining objects representing the signaling control primitives.

2. The switch of Claim 1, wherein the plurality of classes comprises a base class and at least one derived class derived from the base class.

3. The switch of Claim 2, wherein:

the base class comprises the only base class in the API; and

a plurality of derived classes are derived from the base class.

4. The switch of Claim 1, wherein:

the call control function comprises a first call control function;

the switch further comprises a second call control function;

and

each call control function is accessed by the other call control function using the API.

5. The switch of Claim 1, wherein the switch comprises a plurality of sides, each side comprising a plurality of call control agent functions and a call control function.

6. The switch of Claim 1, further comprising a service switching function, wherein the service switching function is operable to facilitate communication with a service control point.

7. The switch of Claim 1, wherein the signaling protocols comprise a Plain Old Telephony System (POTS) signaling protocol, a Session Initiation Protocol (SIP) signaling protocol, and an Integrated Services Digital Network User Part (ISUP) signaling protocol.

8. A telecommunication network comprising a plurality of switches, at least one of the switches comprising:

a plurality of call control agent functions, at least two of the call control agent functions associated with different signaling protocols, the signaling protocols defining a plurality of signaling control primitives; and

a call control function operable to control routing of telephone calls through the switch, wherein the call control function is accessed using an application programming interface (API), the API comprising a plurality of classes defining objects representing the signaling control primitives.

9. The network of Claim 8, wherein the plurality of classes comprises a base class and at least one derived class derived from the base class.

10. The network of Claim 9, wherein:

the base class comprises the only base class in the API; and

a plurality of derived classes are derived from the base class.

11. The network of Claim 8, wherein:

the call control function comprises a first call control function;

the at least one switch further comprises a second call control function; and

each call control function is accessed by the other call control function using the API.

12. The network of Claim 8, wherein the at least one switch comprises a plurality of sides, each side comprising a plurality of call control agent functions and a call control function.

13. The network of Claim 8, wherein the at least one switch further comprises a service switching function, wherein the service switching function is operable to facilitate communication with a service control point.

14. The network of Claim 8, wherein the signaling protocols comprise a Plain Old Telephony System (POTS) signaling protocol, a Session Initiation Protocol (SIP) signaling protocol, and an Integrated Services Digital Network User Part (ISUP) signaling protocol.

15. The network of Claim 8, wherein the at least one switch comprises one of a service switching point and a central office switch.

16. For use in a telecommunication switch, a method comprising:

identifying a plurality of signaling control primitives associated with a signaling protocol;

identifying one or more first classes associated with an application programming interface (API) to a call control function in a switch;

extending one or more second classes associated with the API, the one or more first classes and the one or more second classes defining objects representing the signaling control primitives; and

allowing access to the call control function using the signaling protocol.

17. The method of Claim 16, wherein the first and second classes facilitate access to the call control function by a plurality of call control agent functions, at least two of the call control agent functions associated with different signaling protocols.

18. The method of Claim 16, wherein the first and second classes comprise a single base class and a plurality of derived classes derived from the base class.

19. The method of Claim 16, wherein the signaling protocol comprises one of a Plain Old Telephony System (POTS) signaling protocol, a Session Initiation Protocol (SIP) signaling protocol, and an Integrated Services Digital Network User Part (ISUP) signaling protocol.

20. The method of Claim 16, wherein:

the signaling protocol comprises a first signaling protocol;  
and

the one or more first classes are associated with both the first signaling protocol and a different second signaling protocol.